

Appl. No. 10/834,975
Reply to Office Action of January 11, 2006

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A hearing aid device, comprising:

- a microphone configured to acquire an acoustic input signal and transduce it into an electrical signal;
- 5 a signal processing and control unit configured to process the electrical signal;
- an earpiece configured to transduce the electrical signal into an acoustic signal and to wirelessly transmit data between the hearing aid 10 device and a further device; and
- an antenna coil that is wound on around the earpiece or the microphone, the antenna coil being configured to implement the wireless transmission of data.

15 2. (currently amended) A hearing aid device comprising:

- a microphone configured to acquire an acoustic input signal and transduce it into an electrical signal;
- 15 a signal processing and control unit configured to process the electrical signal;
- an earpiece configured to transduce the electrical signal into an acoustic signal and to wirelessly transmit data between the hearing aid 20 device and a further device with an antenna coil; and
- at least one of a shielding plate or a shielding capsule that shields or 25 encloses the earpiece respectively, the antenna coil being wound on around the shielding plate or the shielding capsule.

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3. (original) The hearing aid device according to claim 2, wherein the shielding capsule is comprised of ferrite material, mu-metal, or an iron sheet.

4. (original) The hearing aid device according to claim 1, further comprising:

5 a compensator configured to compensate a noise signal generated by the earpiece and transmitted to the antenna coil.

5. (original) The hearing aid device according to claim 4, wherein the compensator comprises a compensation coil configured to compensate the
10 electromagnetic field generated by the earpiece.

6. (currently amended) The hearing aid device according to claim 5, further comprising:

15 at least one of a shielding plate or a shielding capsule that shields or
encloses the earpiece respectively, the antenna coil being wound
on around the shielding plate or the shielding capsule, wherein the
compensation coil is wound on around the earpiece, the shielding
plate, or the shielding capsule.

20 7. (original) The hearing aid device according to claim 5, wherein the antenna coil and the compensation coil are implemented as a coil comprising a center tap.

8. (original) The hearing aid device according to claim 5, further comprising:

25 a compensation circuit that modifies an electric earpiece input signal
according to at least one of an amplitude and phase and feeds into
the compensation coil.

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9. (original) The hearing aid device according to claim 8, wherein the compensation circuit is an active filter.
 10. (original) The hearing aid device according to claim 8, wherein the compensation circuit is a passive filter.
 11. (original) The hearing aid device according to claim 9, wherein the filter comprises filter parameters that can be statically selected.
 - 10 12. (original) The hearing aid device according to claim 10, wherein the filter comprises filter parameters that can be statically selected.
 13. (original) The hearing aid device according to claim 9, wherein the filter comprises an adjustment mechanism configured to permit filter parameters to be adaptively adjusted during operation.
 14. (original) The hearing aid device according to claim 10, wherein the filter comprises an adjustment mechanism configured to permit filter parameters to be adaptively adjusted during operation.
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15. (cancelled).
 16. (currently amended) The hearing aid device according to claim 4 15, wherein the compensator is an electronic compensator, and further comprises comprising a subtraction filter to compensate the noise signal generated by the earpiece and transmitted to the antenna coil.